

USA

DECLARATION AND POWER OF ATTORNEY

As a below-named inventor, I hereby declare that my residence, post office address and citizenship are as stated below next to my name; I believe I am the original, first and sole inventor (if only one name is listed below) or an original, first and joint inventor (if plural names are listed below) of subject matter which is claimed and for which a patent is sought on an invention entitled

**NEW THERAPEUTIC USE OF 4-(2-FLUOROPHENYL)-6-METHYL-2-(1-PIPERAZINYLM)THIENO[2,3-D]PYRIMIDINE**

the specification of which  is attached hereto or

was filed on 09 JUL 2003 as United States Application Number or PCT International Application Number PCT/GB03/02974 and was amended on  (if applicable)

I hereby state that I have reviewed and understand the contents of the above identified specification, including the claims, as amended by any amendment referred to above. I acknowledge the duty to disclose information which is material to patentability as defined in 37 CFR 1.56. I hereby claim foreign priority benefits under 35 U.S.C. 119(a)-(d) or 365(b) of any foreign application(s) for patent or inventor's certificate, or 365(a) of any PCT International application which designated at least one country other than the United States of America, listed below and have also identified below, by checking the box, any foreign application for a patent or inventor's certificate, or PCT international application having a filing date before that of the application on which priority is claimed:

Prior Foreign Application Number(s)	Country	Foreign Filing Date	Priority Not Claimed	Certified Copy Attached?
			<input type="checkbox"/>	<input type="checkbox"/> YES <input type="checkbox"/> NO
0216027.3	GB	10 JUL 2002	<input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>
0304648.9	GB	28 FEB 2003	<input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>
			<input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>

As a named inventor, I hereby appoint the following registered practitioner(s) to prosecute this application and to transact all business in the Patent and Trademark Office connected therewith: David R. Saliwanchik, Reg. 31,794; Jeff Lloyd, Reg. 35,589; Doran R. Pace, Reg. 38,261; Jay M. Sanders, Reg. 39,355; Jean E. Kyle, Reg. 36,987; James S. Parker, Reg. 40,119; Frank C. Eisenschenk, Reg. 45,332; Glenn P. Ladwig, Reg. 46,853; Margaret Elron, Reg. 47,545 and Gwendolyn L. Daniels, Reg. 51,594

Direct all correspondence to:  
 Saliwanchik, Lloyd & Saliwanchik  
 3107 S.W. Williston Road  
 Gainesville, FL 32608  
 USA

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under 18 U.S.C 1001 and that such willful false statements may jeopardise the validity of the application or any patent issued thereon.

Full name of sole or First Inventor David CAVALLA

Inventor's signature D. Cavalla

Residence address Cambridge, United Kingdom

Post Office address c/o ARACHNOVA LTD, St John's Innovation Centre  
Cambridge CB4 OWS, United Kingdom

Country of Citizenship United Kingdom Date of signature 14 Dec 04

Full name of Second Inventor Robert William GRISTWOOD

Inventor's signature R. Gristwood

Residence address Cambridge, United Kingdom

Post Office address c/o ARACHNOVA LTD, St John's Innovation Centre  
Cambridge CB4 OWS, United Kingdom

Country of Citizenship United Kingdom Date of signature 14 Dec 2004

## (12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization  
International Bureau



(43) International Publication Date  
18 January 2004 (15.01.2004)

PCT

(10) International Publication Number  
**WO 2004/004734 A1**

(51) International Patent Classification? **A61K 31/519, A61P 1/00** (74) Agent: GILL, Jennings & Every; Broadgate House, 7 Elton Street, London EC2M 7LH (GB).

(21) International Application Number:  
**PCT/GB2003/002974**

(81) Designated States (national): AE, AG, AI, AM, AT, AU, AZ, BA, BB, BG, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EB, ES, FI, GB, GD, GR, GI, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NJ, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(22) International Filing Date: **9 July 2003 (09.07.2003)**

(84) Designated States (regional): ARIPO patent (GI, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CI, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BJ, CI, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

(23) Filing Language: **English**

Published:

(26) Publication Language: **English**

*with international search report*

(71) Applicant (for all designated States except US): ARACHNOVA THERAPEUTICS LTD, [GB/GB]; 95 Halkein Place, St. Helier, Jersey JE1 1BX (GB).

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(72) Inventors; and

(75) Inventors/Applicants (for US only): CAVALLA, David [GB/GB]; Arachnova Ltd., St. John's Innovation Centre, Cambridge CB4 0WS (GB). GRISTWOOD, Robert, William [GB/GB]; Arachnova Ltd., St. John's Innovation Centre, Cambridge CB4 0WS (GB).

**WO 2004/004734 A1**

(54) Title: **4-(2-FLUOROPHENYL)-6-METHYL-2-(1-Piperazinyl)thieno[2,3-d] PYRIMIDINE IN THE TREATMENT OF FUNCTIONAL BOWEL DISORDERS**

(57) Abstract: Use of (4-(2-fluorophenyl)-6-methyl-2-(1-piperazinyl)thieno[2,3-d]pyrimidine or a salt thereof for the manufacture of a medicament for the treatment of a functional bowel disorder.